

Attachment: Clean Version of Claims after the Proposed Amendment

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1- An acrylic composition for use as a capstock for polystyrene structural plastics in composites formed by feedblock coextrusion, the acrylic composition comprised of a blend of an acrylic ester polymer and acrylic polymeric additive.

2- A composite product comprised of a layer of polystyrene structural plastic having a 0.1 to about 2.5 mm thin protective layer of a blend of an acrylic ester polymer and acrylic polymeric additive.

3- A process for producing a composite of a polystyrene structural plastic and a 0.1 to about 2.5 mm thin protective layer, the process comprises joining a molten stream of structural plastic and a molten stream of a blend of an acrylic ester polymer and an acrylic polymeric additive in an extruder discharge conduit to form a single stratified stream of molten material conforming to the cross-section of the conduit and having a relatively sharply defined interface between the structural plastic and the blend, and thereafter passing the stratified stream through a sheet-form extrusion die having its die lips generally aligned with the foregoing interface.

4- An acrylic resin capstock composition comprised of:  
a) 10 - 95% polymethyl methacrylate or an C<sub>1</sub>-C<sub>6</sub> alkyl methacrylate/C<sub>1</sub>-C<sub>6</sub> alkyl acrylate copolymer matrix  
b) 0 - 60% modifiers; and  
c) 5 - 40 % acrylic polymer additive which is comprised of 5 - 90 % methyl methacrylate, 10 - 95% C<sub>1</sub>-C<sub>6</sub> alkyl methacrylate and 0 - 15% methacrylic acid, acrylic acid or C<sub>1</sub>-C<sub>6</sub> esters thereof.

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5- The capstock composition of Claim 4 wherein the acrylic polymer additive is comprised of 20-80% methyl methacrylate and

20-80% butyl methacrylate and has a molecular weight from 25,000-300,000.

6- The capstock composition of Claim 5 wherein the acrylic polymer additive is comprised of 50-80% methyl methacrylate and 20-50% butyl methacrylate and has a molecular weight from 25,000-100,000.

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7- A co-extruded product comprised of two layers  
(a) a first layer comprised of polystyrene structural plastic and  
(b) a second layer comprised of  
(i) methyl methacrylate resin, and  
(ii) an acrylic polymer additive that increases the adhesive strength between the layers.

8- The product of Claim 7 wherein the structural plastic is acrylonitrile/butadiene/styrene copolymer.

9- The product of Claim 7 wherein the polystyrene is high impact polystyrene or crystalline polystyrene.

10- The product of claim 7 wherein the acrylic polymer additive is a polymer comprised of:

- (a) 5-90 wt% methyl methacrylate,
- (b) 10-95 wt% C<sub>2</sub>-C<sub>8</sub> alkyl methacrylate, and
- (c) 0-15 wt% methacrylic acid, acrylic acid or C<sub>1</sub>-C<sub>8</sub> esters thereof.

11- The product of claim 10 wherein the acrylic polymer additive is a polymer having monomer units of methyl methacrylate, butyl methacrylate and optionally methacrylic acid.

12- The product of claim 11 wherein ratio of the monomer units is:

- (a) 20 to 80 wt% methyl methacrylate,

- (b) 20 to 80 wt% butyl methacrylate and
  - (c) 0 to 10 wt% methacrylic acid.
- 13- The product of claim 12 wherein ratio of the monomer units is:
- (a) 50 to 80 wt% methyl methacrylate,
  - (b) 20 to 50 wt% butyl methacrylate and
  - (c) 0 to 10 wt% methacrylic acid.
- 14- The product of Claim 7 wherein the second layer is comprised of:
- (i) 60 to 95 wt% of methylmethacrylate resin and
  - (ii) 5 to 40 wt% of the acrylic polymer additive.
- 15- The product of Claim 7 wherein the first layer contains pigments, dyes, fillers, PS, acrylic and HIPS rework, different grades of HIPS.
- 16- A co-extruded product comprised of two layers
- (a) 50 to 95 wt% being a first layer comprised of high impact polystyrene, and
  - (b) 5 to 50 wt% being a second layer being comprised of
    - (i) 60 to 95 wt% of an acrylate resin, and
    - (ii) 5 to 40 wt% of an acrylic polymer additive which is copolymer or terpolymer that increases the adhesive strength between the layers.
- 17- The product of Claim 16 wherein the acrylic polymer additive is a 50-80% methyl methacrylate and 20-50% butyl methacrylate polymer having a molecular weight from 25,000-300,000.
- 18- The product of Claim 16 wherein the acrylic polymer additive is a 20-50 % methyl methacrylate and 50-80% butyl methacrylate having a molecular weight from 25,000-300,000.

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19- An acrylic composition product for use as a capstock in sanitary applications, appliance housings, appliance liners, appliance doors, building doors, window trim, shutters, automotive parts or farm equipment comprised of a composite of a polystyrene structural plastic and capstock, the composite formed by feedblock coextrusion, wherein the acrylic composition comprised of a blend of an acrylic ester polymer and acrylic polymeric additive.